



Microsoft Developer Experience GitHub Copilot Demo

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GitHub Copilot



Visual Studio Code

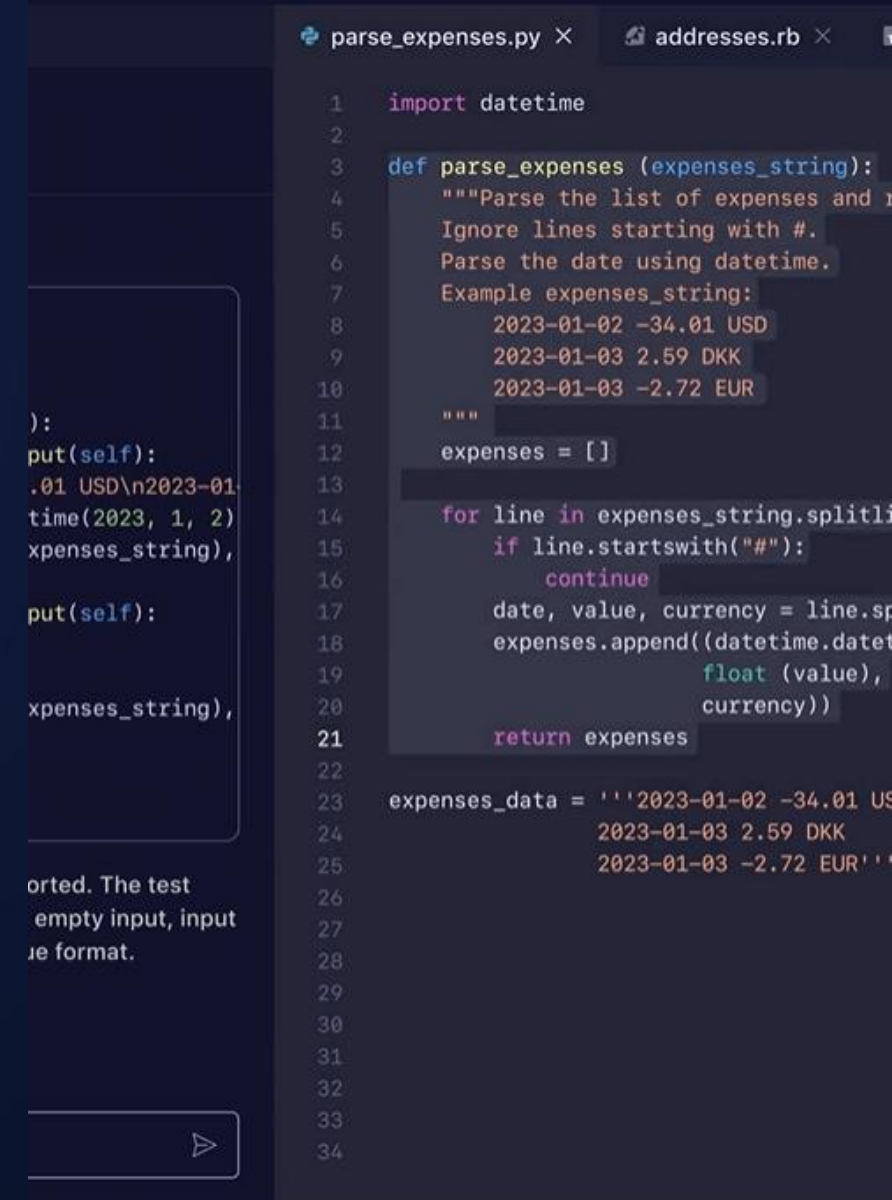


GitHub CoPilot AI pair-programmer

- CoPilot is exactly that, co-pilot, not a replacement
- Training data, hints & suggestions
 - IOW: sometimes, recommendations are wrong
- Predictive, based on semantics & context

Developer is PIC

- Design patterns & structure
- Coding standards, source management & style
- Context & snippets must be vetted for expected output



```
1 import datetime
2
3 def parse_expenses (expenses_string):
4     """Parse the list of expenses and
5     Ignore lines starting with #.
6     Parse the date using datetime.
7     Example expenses_string:
8         2023-01-02 -34.01 USD
9         2023-01-03 2.59 DKK
10        2023-01-03 -2.72 EUR
11    """
12    expenses = []
13
14    for line in expenses_string.splitlines():
15        if line.startswith("#"):
16            continue
17        date, value, currency = line.split()
18        expenses.append((datetime.datetime.strptime(date, "%Y-%m-%d"),
19                        float(value),
20                        currency))
21    return expenses
22
23 expenses_data = '''2023-01-02 -34.01 USD
24 2023-01-03 2.59 DKK
25 2023-01-03 -2.72 EUR'''
26
27
28
29
30
31
32
33
34
```

GitHub Copilot Scenario

1

Feature pulled from backlog for Sprint

2

Peer development team lacks required **time** & **experience** to implement feature

3

Director requested assistance to implement

4

Complete within 3 days & handoff to team for integration

Feature requirements

1

Develop a compute service endpoint in Azure?

2

Requires a secure method to store secrets?

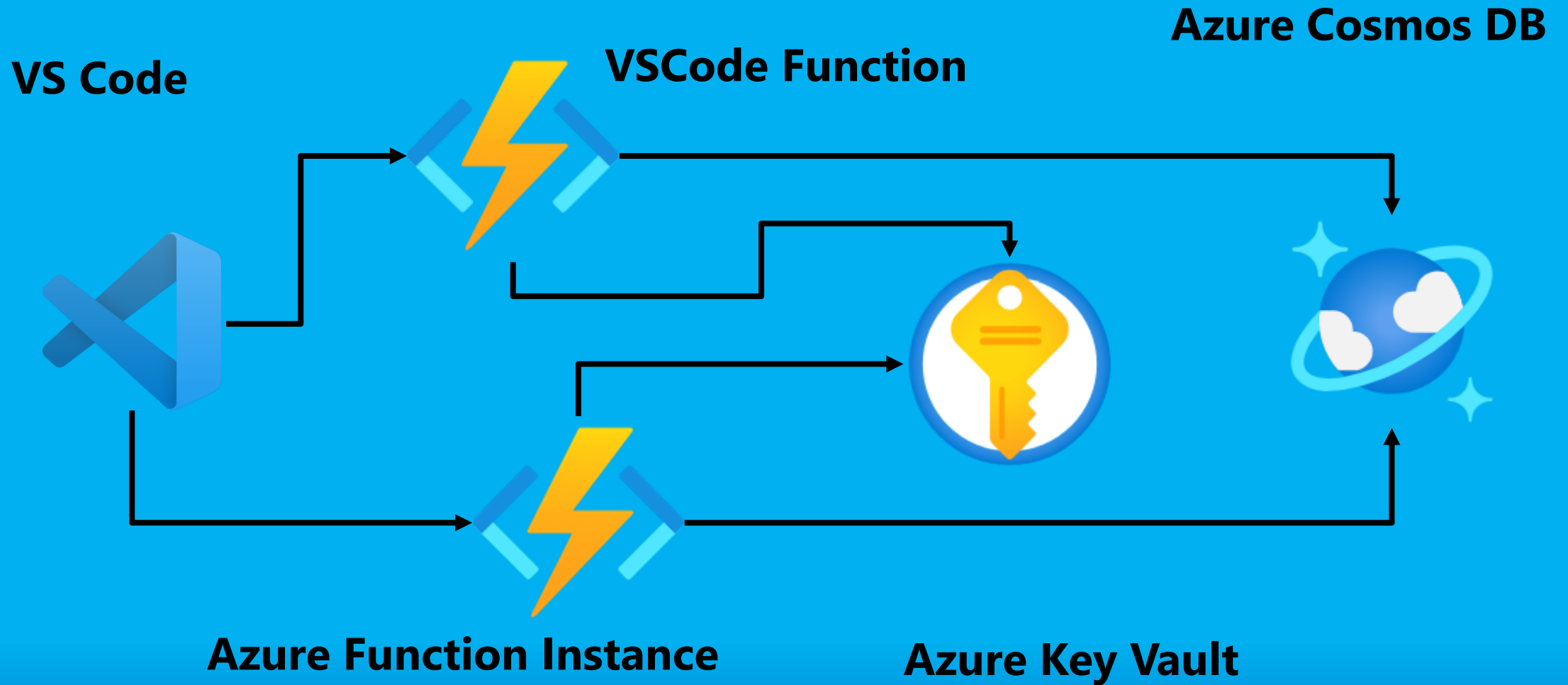
3

Persist data to Cosmos DB?

4

Service must be scalable to handle dynamic workloads?

Conceptual Architecture Diagram



Let's fail fast, VS Code & CoPilot



TRADITIONAL APPROACH

- Microsoft Learn Modules: ~15 hours
- Quick Start Modules: 3-4 hours
- Stackoverflow
- W3Schools, etc
- Training: internal, external, Udemy, LinkedIn

Ask a question or type '/' for commands

Quick start questions, considerations

- Azure Service: [Azure compute decision tree](#)?
- Visual Studio Code Extensions?
- .NET packages required?
- Prototype, scaling, REST endpoint?
- Securely manage, access a secret?
- Store persistent data?
- Challenges
 - ✓ Learning curve & .NET language
 - ✓ KeyVault URI & Secret
 - secret squirrel nut stash
 - ✓ CosmosDB & Container name

Virtual Joel



empty input, input
ie format.

```
parse_expenses.py × addresses.rb ×  
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GitHub CoPilot references

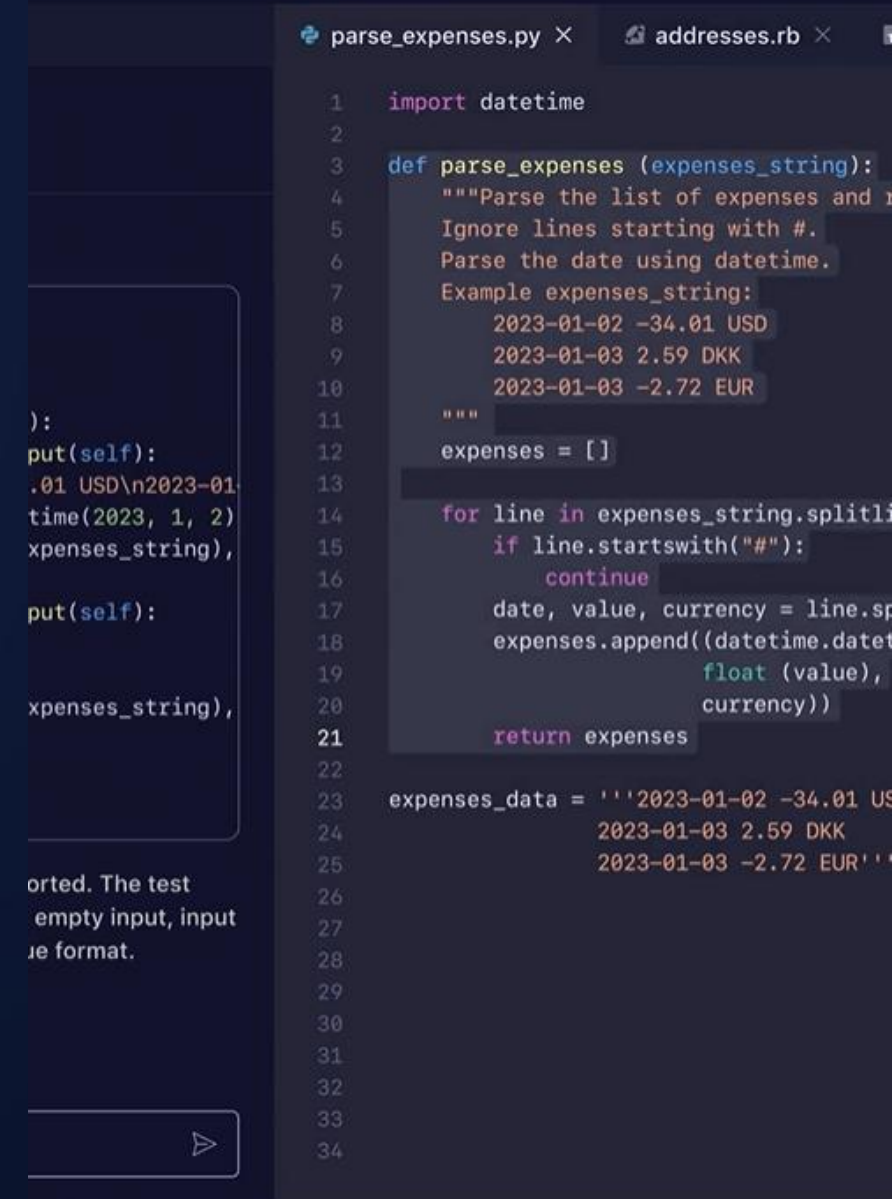
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[GitHub CoPilot MSFT Build: May, 2023](#) BRK255H

[Visual Studio Code YouTube channel](#)





GitHub Copilot



Visual Studio Code